

EXHIBIT B



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January 12, 2024

Brian E. Klein
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Via E-Mail

AUSA Thomas Burnett
AUSA Peter Davis
AUSA Tian Huang
United States Attorney's Office
Southern District of New York
1 Saint Andrews Plaza
New York, New York 10007

**Re: *United States v. Avraham Eisenberg,*
23 Cr. 10 (AS)**

Dear Counsel:

This letter is respectfully submitted to supplement defendant Avraham Eisenberg's previous expert witness disclosure served on the government on October 30, 2023.¹ This disclosure is made without the benefit of hearing the trial testimony and all the relevant information contemplated by Federal Rule of Criminal Procedure 16 and 18 U.S.C. § 3500.

Mr. Eisenberg explicitly reserves the right to further amend and/or supplement these disclosures based upon, among other things, the receipt of documents and other evidence from the government or third-parties, counsel's ongoing review of the recent government discovery productions, trial preparation, disclosures about anticipated witness testimony (including the government's own designated expert(s)), and ultimately the evidence (testimonial or opinion) offered in the government's case-in-chief.

Jeremy Sheridan

- As set forth in more detail in his *curriculum vitae*, which is attached as Exhibit A, Mr. Sheridan is an expert in blockchain technology (including cryptocurrencies). He has been engaged in blockchain and cryptocurrency analysis and investigations since at least 2019, and has been involved in cybersecurity for approximately 25 years. His education and professional qualifications to offer the below-described opinions are set forth in detail in his *curriculum vitae*. He is more than qualified to offer his expected expert

¹ A version signed by each expert was served on November 28, 2023.



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testimony. His *curriculum vitae* lists his publications for the prior 10 years and his testimony for the past four as required by Rule 16.

- In forming his opinions, Mr. Sheridan has relied upon his education, knowledge, experience, and training in cybersecurity and blockchain technology (including cryptocurrencies). As part of the basis for his opinions, Mr. Sheridan may rely upon his own research in this field as well as his attendance at and participation in blockchain and cryptocurrency conferences, as well as other technology conferences. His testimony will also be based on his review of publicly available information regarding the Solana blockchain, the Mango Markets protocol, and Mr. Eisenberg's alleged conduct in the indictment, as well as relevant portions of the government's discovery produced as of the date of this notice.
- Mr. Sheridan is expected to offer background testimony on open-source software, blockchains (including protocols, decentralization, and DAOs²) and cryptocurrencies (e.g., Bitcoin, Solana (SOL), Mango (MNGO), USDC, USDT, *etc.*). Specifically, he will explain that the protocols are designed to, in some instances, enable conduct, and in others, prevent it. Though technically feasible at the time of the trades at issue, Mango Markets had no Terms of Service beyond its code—it only gave a warning to users. He has relied upon his education, knowledge, experience, and training in cybersecurity and blockchain technology (including cryptocurrencies), in addition to his review of publicly available information relating to Mango Markets, as well as relevant portions of the government's discovery produced as of the date of this notice.
- Mr. Sheridan is expected to provide background testimony on the creation and operation of the Solana blockchain and the Mango Markets protocol (including the role SOL and MNGO play on that blockchain, and the role of the Mango DAO), including Mango Market FAQs and tutorials / research tools at the time of Mr. Eisenberg's alleged trades and its pricing oracles, as well as changes to the Mango Markets protocol after Mr. Eisenberg's alleged trades. He has relied upon his education, knowledge, experience, and training in cybersecurity and blockchain technology (including cryptocurrencies), in addition to his review of publicly available information relating to Mango Markets in forming this opinion, as well as relevant portions of the government's discovery produced as of the date of this notice.
- Mr. Sheridan is expected to opine that the trades allegedly executed by Mr. Eisenberg were not prohibited by the Mango Markets protocol (including the Mango DAO), as well as the Solana blockchain. He may also opine that at the time of the alleged trades, it was publicly available how the pricing oracles operated, and that the Mango Markets methods for determining the health of an end-user account were designed such that parties could significantly overleverage transactions. He has relied upon his education, knowledge, experience, and training in cybersecurity and blockchain technology (including

² DAO stands for Decentralized Autonomous Organization.



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cryptocurrencies), in addition to his review of publicly available information relating to Mango Markets in forming this opinion, as well as relevant portions of the government's discovery produced as of the date of this notice.

- As an expert in blockchain technology and decentralized finance (“DeFi”), Mr. Sheridan’s analysis of the Mango Markets trading allegedly conducted by Mr. Eisenberg results in the following additional opinions. Mr. Sheridan has relied upon his education, knowledge, experience, and training in cybersecurity and blockchain technology (including cryptocurrencies), in addition to his review of publicly available information relating to Mango Markets and discovery in this matter as cited below in forming these opinions, as well as relevant portions of the government’s discovery produced as of the date of this notice.
 - **Strategic Utilization of Market Mechanics without Code Violation:** the alleged trades on Mango Markets utilized authorized functionalities, highlighting systematic vulnerabilities such as oracle weaknesses and low liquidity token risks. These actions leveraged the platform’s existing capabilities without altering the underlying code.
 - The alleged trades in this case required no manipulation of the Mango Markets or Solana code. Mango Markets lacked trade restrictions that would have prevented these trades.
 - Low liquidity impact and oracle price strategy challenges: Eisenberg’s alleged trading actions brought to light the significant impact of low liquidity of certain tokens, notably MNGO. Mango Markets developed a token, MNGO, that had limited resale value outside of the Mango Markets platform. As such, there was limited incentive to trade the token outside of the Mango Markets platform, which resulted in low liquidity of the token. Losses were a natural consequence of Mango Markets having created a token with little utility, because there was therefore no other offsetting market or use for the token. By propping up its trading environment on a token of limited use and low liquidity, Mango created a vulnerable ecosystem. The low liquidity made MNGO’s valuation excessively reliant on its own price within the Mango Markets environment. The absence of mechanisms to counteract abrupt changes in value left the market susceptible to considerable fluctuations. This scenario was intensified by strategies that capitalized on the platform’s limited liquidity and the inherent weaknesses in the oracle based pricing system. The inability of Mango Markets to effectively manage these oracle pricing strategies and liquidity issues unveiled critical deficiencies in the platform’s risk management and market stability framework.



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- **Terms of Service Analysis:** the lack of specific prohibitions in Mango Markets' Terms of Service during the relevant period points to gaps in vulnerability identification, prevention, and response mechanisms. Mango Markets could have implemented thorough terms of service addressing actions that were allowed by the code but prohibited by the Protocol's policies. But, Mango Markets merely had a pop-up that read, "The V3 protocol is in public beta. This is unaudited software, use it at your own risk," and required that users check a box indicating, "I understand and accept the risks." See USAO_SDNY_R03_0016082.
- **Platform Vulnerabilities Acknowledgment:** Mango Markets' own documentation revealed critical risks, including negative equity accounts, oracle errors, and potential contract exploits. This was available to all users of the protocol. Neodyme AG conducted a security audit in May 2022, updated in July 2022 (prior to the alleged trades in this case), which Mango Markets made available through Github, but this audit failed to address the risks discussed in Mango Markets' documentation.³ Mango Markets' own Litepaper⁴ explicitly mentioned these vulnerabilities:
 - **"Negative equity accounts and socialization of losses[:]** If the price of a user's collateral falls fast enough or the price of the borrowed tokens increases fast enough, the account may fall below 100% collateral ratio without a liquidator taking the position. In this case, funds are pulled from lending pools to bring the account to 101% coll[ateral] ratio. These losses are socialized across all lenders which may trigger a liquidation cascade if most lenders are also very close to being liquidated."
 - **"Oracle error[:]** The Solana Flux Aggregator is also brand new in Solana and may have errors in the code. The centralized exchanges feeding the price may also have errors. Since all oracle price publishers are looking at the same centralized exchanges, price errors will affect all of them. This could trigger bad liquidations."
 - **"Illiquid deposits[:]** There is a chance the user is not able to withdraw deposits because they are borrowed. This could be a problem for someone who needs liquidity immediately. The same issue applies to positions that are lent out—the user may not be able to close a position if the utilization rate is 100%. However, the protocol guarantees a 100% APY while the user waits to be able to withdraw."
 - **"Smart contract exploit[:]** The code has been looked over by volunteers, but there has not been a formal audit. While there are bounties offered for

³ <https://github.com/blockworks-foundation/mango-v3/blob/main/audit.pdf>

⁴ <https://web.archive.org/web/20220827184651/https://docs.mango.markets/litepaper>



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responsible disclosure of potential vulnerabilities, there is no guarantee that hackers will choose the bounty over a profitable exploit.”

- **Lack of Risk Management and Governance Frameworks:** the alleged trading activities underscore the absence of robust risk management and governance frameworks on the Mango Markets platform. Unlike similar DeFi platforms, Mango Markets failed to have any of the following frameworks in place to mitigate transactions that could cause liquidity issues on the platform such as:
 - Position and Open Interest Limits
 - Borrow Limits
 - Risky Treatment of Unrealized P/L [UPL] in Withdrawals: the protocol’s allowance for withdrawals based on unrealized profits.
 - Mango Markets was warned of the possibility of a trade similar to those alleged in this case in March 2022 and ignored it. *See generally*, <https://neptuemutual.com/blog/decoding-mangos-vulnerability/>
- In addition to the bases set forth above, Mr. Sheridan has also reviewed the following items:
 - Indictment – United States v. Avraham Eisenberg
 - Expert Disclosures for U.S. Government – United States v. Avraham Eisenberg
 - Mango Markets Website, <https://mango.markets/>
 - <https://blockworks.co/news/mango-markets-mangled-by-oracle-manipulation-for-112m>
 - <https://blockworks.co/news/mango-markets-wants-eisenberg-to-pay%0d>
 - <https://blog.kaiko.com/mango-markets-and-the-benefits-and-limitations-of-oracles-753ce6d2a732>
 - <https://cointelegraph.com/news/how-low-liquidity-led-to-mango-markets-losing-over-116-million>
 - <https://neptunemutual.com/blog/decoding-mangos-vulnerability/>
 - <https://trade.mango.markets/risk-calculator>
 - <https://twitter.com/mangomarkets/status/1418004085010272256>



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- <https://web.archive.org/web/20220524174656/https://docs.mango.markets/mango/perp-contract-specs>
- <https://web.archive.org/web/20220827184651/https://docs.mango.markets/litepaper>
- <https://web.archive.org/web/20221006003619/https://docs.mango.markets/tutorials/risk-calculator>
- <https://web.archive.org/web/20230327200447/https://docs.mango.markets/legal/terms-of-use>
- <https://www.immunobytes.com/blog/mango-markets-exploit-oct-11-2022-detailed-analysis/#:~:text=,margin%20trades%2C%20for%20market%20manipulation>
- <https://www.investopedia.com/terms/b/bitcoin-whale.asp>
- <https://www.investopedia.com/mango-markets-got-hacked-6750070>
- [https://www.mondaq.com/canada/fin-tech/1240862/defi-platform-mango-loses-\\$117-million-in-smart-contract-exploit-are-daos-responsible-for-bad-smart-contracts](https://www.mondaq.com/canada/fin-tech/1240862/defi-platform-mango-loses-$117-million-in-smart-contract-exploit-are-daos-responsible-for-bad-smart-contracts)
- <https://www.nytimes.com/2022/10/27/technology/elon-musk-twitter-deal-complete.html>
- <https://www.coingecko.com/research/publications/insights-and-implications-of-the-mango-squeeze>
- <https://neodyme.io/reports/mango/>
- https://medium.com/@Austerity_Sucks/thoughts-on-110m-mango-markets-exploit-10e3d01ab0b5

Approval and Signature

I approve the disclosure of my qualifications, anticipated opinions, and bases for such opinions, as set forth above.

DocuSigned by:

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Jeremy Sheridan



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John Montgomery, PhD

- Dr. John Montgomery is an expert in financial economics, the traditional finance sector, securities, commodities, and valuation. His education and professional qualifications to offer the below-described opinions are set forth in detail in his *curriculum vitae*, which is attached as Exhibit B. Dr. Montgomery is more than qualified to offer his expected expert testimony. His *curriculum vitae* lists his publications for the prior 10 years and his testimony for the past four as required by Rule 16.
- In forming his opinions, Dr. Montgomery has relied upon his education, knowledge, experience, and training in financial economics, as well as his specific and extensive education, knowledge, experience, and training in the field of economics. As part of the basis for his opinions, Dr. Montgomery may rely upon his own research and publications in this field. His testimony will also be based on his review of publicly available information regarding the Solana blockchain, the Mango Markets protocol and Mr. Eisenberg's alleged conduct in the indictment, as well as relevant portions of the government's discovery produced as of the date of this notice.
- Dr. Montgomery may testify that conventional futures and swaps contracts differ from the so-called perpetual futures offered on Mango Markets. He may explain that conventional futures contracts obligate the buyer to purchase a prespecified amount of an underlying asset at a prespecified price on a prespecified expiration date. As the expiration date approaches, the value of the futures contract converges to the value implied by the spot market. In traditional financial markets, swaps are derivative contracts whereby two parties exchange a series of cash flows that are based on the value and income stream of one or more underlying assets over a specific period of time.⁵ In contrast, perpetual futures do not have expiration dates. In order to keep the value of the perpetual aligned with the spot market, perpetuals contain a funding mechanism, whereby the long (short) side of the trade makes a payment to the short (long) side of the trade if the perpetuals price is above (below) the spot price. His expected testimony on this topic will be based on his research and experience in financial markets, his review of documentation for futures exchanges and documents related to Mango Markets, as well as relevant portions of the government's discovery produced as of the date of this notice.
- Dr. Montgomery may also testify that the price of MNGO perpetuals at the time of the defendant's alleged trading on October 11, 2022 was not artificial. Dr. Montgomery's testimony on this topic will be based on this experience analyzing trading of various financial products and on his review of documents related to Mango Markets, as well as relevant portions of the government's discovery produced as of the date of this notice.

⁵ See John C. Hull, *Options, Futures, and Other Derivatives*, 10th ed., Pearson, 2018, p. 155 ("A swap is an over-the-counter derivatives agreement between two companies to exchange cash flows in the future.").



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- Dr. Montgomery may also testify on thin/illiquid markets and volatility, two characteristics of MNGO. In these settings, the current trading price may not accurately reflect a fundamental value. Dr. Montgomery's testimony on this topic will be based on his research and experience in financial markets and his review of documents related to Mango Markets, as well as relevant portions of the government's discovery produced as of the date of this notice.
- Dr. Montgomery may also testify that it is typical for traders in financial markets to attempt to conceal their trading intentions and strategies from other participants in those markets. If information held by a trader leaks to other market participants, the profit opportunity the trader had from the information may be lost as other market participants cause the market quotes and prices to move.⁶ Dr. Montgomery will base this testimony on his experience and research in the economics of trading in financial markets.
- Dr. Montgomery may also testify on the general stability of the stablecoins USD Coin (USDC) and Tether (USDT), compared with MNGO and the major cryptocurrencies. Dr. Montgomery will base this testimony on data on market prices for cryptocurrencies.⁷
- Dr. Montgomery may also explain the usage of the term "wash trade" in financial markets, and how the term does not describe the long and short positions allegedly taken by Mr. Eisenberg in the perpetual contracts. Wash trades can be purchases and sales of a commodity or financial instrument intended to create a misleading impression of trading volume. The term wash trade is also used to refer to an offsetting purchase and sale of a financial instrument or security, designed to permit an investor to recognize a capital loss for tax purposes, without changing the investor's economic exposure. Dr. Montgomery will base this testimony on his experience in analyzing financial markets and transactions.⁸
- Dr. Montgomery may testify that many U.S. dollar-denominated instruments considered part of the U.S. money supply are issued by private entities. The primary example is customer deposits at banks, which are used for many transactions.⁹ Issuance by a private entity is therefore not a unique characteristic of cryptocurrencies, including stablecoins. Dr. Montgomery will base this testimony on his training as an economist, his review of

⁶ See Markus K. Brunnermeier and Lasse Heje Pedersen, *Predatory Trading*, 60:4, Aug. 2005, at 1825-1863.

⁷ Bloomberg Finance LP (prices of USDC and USDT and major cryptocurrencies, such as Bitcoin, Ether, and Solana); FTX_MANGO_SDNY_000000001.

⁸ See James Chen, *Wash Trading, What it is and How it Works, with Examples*, Investopedia, available at <https://www.investopedia.com/terms/w/washtrading.asp>

⁹ See Board of Governors of the Federal Reserve System, "Money Stock Measures – H.6 Release," available at <https://www.federalreserve.gov/releases/h6/current/default.htm>



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relevant sources, and his professional experience at the Federal Reserve Board and other organizations.

- In addition to the bases set forth above, Dr. Montgomery has also reviewed the following items:
 - Indictment – United States v. Avraham Eisenberg
 - Expert Disclosures for U.S. Government – United States v. Avraham Eisenberg
 - Mango Markets Website, <https://mango.markets/>
 - Realms, “Mango Markets DAO”, <https://dao.mango.markets/dao/MNGO>
 - DeepDAO, https://deepdao.io/organization/1323d31d-bd0c-4605-ba55-573dd7129324/organization_data/finance
 - Rostek and Weretka, “Thin Markets”, *The New Palgrave Dictionary of Economics*.
 - Danny Nelson, “Solana’s Mango Markets DEX Raises \$70 Million in MNGO Token Sale,” *coindesk.com*, Aug. 12, 2021.
 - FTX_MANGO_SDNY_000000001-00000199
 - SDNY_01_00016570
 - SDNY_01_00016577
 - SDNY_01_00016594
 - SDNY_01_00016595
 - SDNY_01_00016608
 - SDNY_01_00016637
 - USAO_SDNY_01_00000800-802
 - USAO_SDNY_01_00000805-811
 - USAO_SDNY_01_00009931-9943
 - USAO_SDNY_01_000119721197-11982
 - USAO_SDNY_01_00011984-12075



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- USAO_SDNY_01_00012076
- USAO_SDNY_01_00012078
- USAO_SDNY_01_00012079
- USAO_SDNY_01_00012081-12083
- USAO_SDNY_01_00012085
- USAO_SDNY_01_00016562
- USAO_SDNY_01_00016082

Approval and Signature

I approve the disclosure of my qualifications, anticipated opinions, and bases for such opinions, as set forth above.

DocuSigned by:
A handwritten signature in black ink that reads 'John Montgomery'.
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John Montgomery

As always, we are available to discuss the above or any other aspect of the case.

Very truly yours,

A handwritten signature in black ink that appears to read 'B. E. Klein'.

Brian E. Klein
Ashley E. Martabano
Riley P. Smith
Waymaker LLP

-and-

Sanford N. Talkin
Noam B. Greenspan
Talkin, Muccigrosso & Roberts, LLP

Attorneys for Avraham Eisenberg

EXHIBIT A

Jeremy A. Sheridan

Managing Director

Blockchain and Digital Assets

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+ 1 202 215 2832

Jeremy.Sheridan@fticonsulting.com

Education

Master's in Public Administration,
University of Arizona

Certifications

Chainalysis Investigation Specialist
Certification (CISC), Chainalysis

Certified Smart Contract Auditor,
Blockchain Council

Chainalysis Reactor Certification (CRC),
Chainalysis

Certified Blockchain Expert, Blockchain
Council

Certified Cryptocurrency Auditor,
Blockchain Council

Certified Cryptocurrency Expert,
Blockchain Council

Blockchain for Business Executive
Education Certificate, Columbia
Business School

Certified Information Security Manager
(CISM), Information Systems Audit and
Control Association (ISACA)

Chief Information Security Officer
(CISO) Certificate, Carnegie Mellon
University

Security Leadership Certificate, Global
Information Assurance Certificate
(GIAC)

Strategic Planning, Policy, and
Leadership Certificate, GIAC

Associations

Virginia Blockchain Council

Global Digital Asset & Cryptocurrency
Association (Global DCA)

Jeremy A. Sheridan is an expert in digital currencies, financial crime investigations, blockchain and smart contracts. As an agent with the Secret Service, he conducted more than 60 federal and state financial and cybercrime investigations, resulting in 37 arrests and a 100% conviction rate. He has testified in federal and state court on multiple occasions and served as an expert witness on cryptocurrency matters in front of the U.S. House of Representatives and the U.S. Senate. As Assistant Director at the Secret Service for the Office of Investigations, Jeremy established the agency's first dedicated illicit finance and digital asset investigative team and directed the agency's global investigative mission of 3,000 personnel and 162 offices. Mr. Sheridan supports all of FTI Consulting's cryptocurrency workstreams, with his focus on digital asset investigations, expert testimony for digital asset-based cases, and development of investigative strategies to identify the flow of funds and assign attribution to end-user accounts.

In addition to his work on digital assets and blockchain, Mr. Sheridan leads large scale engagements for clients in data governance and data privacy, supports digital asset forensic operations, and directs fraud investigative teams.

Mr. Sheridan has led private sector digital asset business in regulatory strategy, policy, and procedures, representing client bases in proactive engagements to include building trusted relationships with government officials and organizations to communicate regulatory successes, provide recommendations, identify impacts of potential regulatory decisions, and develop new approaches in anticipation of the evolving regulatory landscape. He has identified compliance gaps created by new regulatory actions. He has coordinated Compliance and Legal entities to evaluate the adequacy and effectiveness of internal controls relating to regulatory risks. A few notable projects include:

- Directed regulatory response to Terra / Luna, Celsius, OFAC sanctions of industry entities, and FTX bankruptcy.
- Identified, investigated, and prosecuted complex cyber-crime violations through strategically aligned collaborations with the private sector, preventing more than \$3B in fraud loss.
- Directed judicial actions to seize more than \$2.5B in fraudulently obtained funds, including assets in cryptocurrency and digital money.
- Created and implemented the United State Secret Service's first dedicated digital asset investigative unit.

Jeremy A. Sheridan, November, 2023

Testimony/Expert Witness

- Testimony, June 9, 2023 - FTX Trading LTD., et al., United States Bankruptcy Court District of Delaware, Chapter 11 Case No. 22-11068 (JTD).
- Deposition, May 26, 2023 – Securities and Exchange Commission v. Daniel Putnam, Jean Paul Ramirez Rico, Angel A. Rodriguez, MMT Distribution, LLC, R & D Global LLC, and Richard T. Putnam, United States District Court District of Utah, Case No. 2:20-cv-00301.
- Declaration, April 20, 2023 – FTX Trading LTD., et al., United States Bankruptcy Court District of Delaware, Chapter 11 Case No. 22-11068 (JTD).
- Expert Report, April 17, 2023 – Securities and Exchange Commission v. Daniel Putnam, Jean Paul Ramirez Rico, Angel A. Rodriguez, MMT Distribution, LLC, R & D Global LLC, and Richard T. Putnam, United States District Court District of Utah, Case No. 2:20-cv-00301.
- Expert Witness, United States House of Representatives, House Committee on Homeland Security, Subcommittee on Cybersecurity, Infrastructure Protection & Innovation and Subcommittee on Intelligence and Counterterrorism, “A Whole-of-Government Approach to Combatting Ransomware: Examining DHS’s Role”, November 17, 2021. [Committee Transcript](#).
- Expert Witness, United States Senate, Senate Committee on Judiciary, "America Under Cyber Siege: Preventing and Responding to Ransomware Attacks", July 27, 2021. [Committee Video](#), (testimony commences at 57:23).
- Expert Witness, United States House of Representatives, House Committee on Homeland Security, “Terrorism and Digital Financing: How Technology is Changing the Threat”, July 22, 2021. [Committee Video](#), (testimony commences at 36:50).
- Testimony, April 18 -19, 2001, USA, et al v. Alfred Crutchley, Threats Against the President of the United States, Threats Against Former Presidents and Their Families, Possession of a Firearm by a Person Previously Convicted of a Felony, Case No. 4:00-cr-01413-FRZ.
- Grand Jury Testimony, September 20, 2000, USA, et al v. Drake, Passes Counterfeit Obligations or Securities, Case No. 4:00-cr-01231-RCC-JC-1.
- Grand Jury Testimony, May 10, 2000, USA v. Rickey, Conspiracy to Pass Counterfeited Obligations of the United States, Case No. 4:00-cr-00687-RCC-2.
- Grand Jury Testimony, April 21, 1999, USA, et al v. Romero, Conspiracy to Pass Counterfeit Obligations or Securities, Passes Counterfeit Obligations or Securities, Case No. 4:99-cr-00591-FRZ-1.
- Grand Jury Testimony, March 3, 1999, United States of America v. Sandoval, Fraud and Related Activity in Connection with Access Device, Case No. 4:99-cr-00305-FRZ-GEE-1.
- Testimony, January 14, 1999, USA, et al v. Ba, Conspiracy to Defraud the United States, Utter Forged and Counterfeit Security, Bank Fraud, Case No. 4:98-cr-01042-FRZ-2 / 4:98-mj-04870-JC-2.
- Grand Jury Testimony, December 9, 1998, USA, et al v. Piery, Possession and Uttering Counterfeited Obligations of the United States, Case No. 4:98-cr-01500-FRZ-CRP-1.
- Grand Jury Testimony, September 9, 1998, USA, et al V. Crowder, et al, Conspiracy to Counterfeit and Pass Obligations or Securities, Counterfeiting and Forging Obligations or Securities, Case No. 4:98-cr-01096-FRZ-JC-1.

Media Appearances and Publications

- [Trends in Regulation of Digital Assets](#), The Block Pro Research, 2023
- [Risk Readiness Steps Can Help Protect, Track Digital Assets](#), Law360, 2023
- [Think You Know Ransomware](#), Sophos Documentary, 2023

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- [CFTC Sues a DAO, Raising Legal Questions for DeFi Founders and Users](#), Decrypt.co, 2022
- [As Crypto Regulation Looms Ahead, Here are the Bills to Look Out For](#), TechCrunch.com, 2022
- [Crypto Rules Likely to Follow European Models as U.S. Fiddles](#), Forbes.com, 2022
- CoinDesk TV interviews, September 7, 2022 and October 11, 2022
- [Prime Trust State of Regulation Report](#), October 2022
- CNBC Crypto World interview, [October 2022](#)
- [GeoComply Blog Post](#), Geolocation Tools are “Invaluable Assets” for Sanction Controls, November 2022

Professional Presentations and Speaking Engagements

- Virginia Commonwealth University School of Business: Predictive Analytics in Capital Markets, December 2023
- The Block Webinar: Trends in Regulation of Digital Assets. September 26, 2023
- Cambridge Symposium on Economic Crime: The Anatomy of a Crisis: Who is Responsible, Accelerating Legislative and Regulatory Initiatives, Finding the Lighted Path out of the Darker Side of Crypto. September 5th, 6th, and 7th, 2023
- Digital Assets Week California: Stopping Digital Assets Crimes with Data. May 3, 2023
- CoinDesk Webinar: A Look Ahead at Top Compliance Trends in Crypto for 2023. December 1, 2022
- Money 2020: Crypto Advocacy in the U.S. and Nigeria. October 25, 2022
- Blockworks Digital Asset Summit: The Convergence of CeFi and DeFi Architecture. September 14, 2022
- CoinDesk Webinar: State of the Industry, Regulation for Now and the Future. September 15, 2022
- P3 Network: National Security Implications if the U.S. Does Not Lead in Crypto Regulation. September 10, 2022
- Cambridge Symposium on Economic Crime: Cryptocurrency and Blockchain AML Summit, Overview of the Current Landscape and A Whole New World. September 5th and 7th, 2022
- International Association of Financial Crimes Investigators (IAFCI): Digital Asset Regulatory Frameworks for Security Considerations. August 31, 2022
- SINET Live: Behind the Inner Workings of Criminal and Nation State Tradecraft: Their MOs, Organizational Structures, and Tactics. January 18, 2021
- Washington Post Live: Securing Cyberspace. January 13, 2021
- Secure World: Ransomware as an Evolution of Cybercrime. September 23, 2021

Employment History

- March 2023 – Present: FTI Consulting – Technology Segment, Washington, D.C., Managing Director
- April 2022 – February 2023: Prime Trust LLC, Vice President of Regulatory Affairs
- September 1997 – April 2022: United States Secret Service, Assistant Director

EXHIBIT B



INTENSITY, LLC
New York, New York
646.766.9188
intensity.com

October 2023

John Montgomery, Ph.D.
Managing Director

John Montgomery, Ph.D. is a Managing Director at Intensity. He is an expert in financial economics, securities, and valuation. He has testified at trial in federal and state court and in arbitration, provided expert reports, affidavits, and depositions, conducted complex economic, financial, and statistical analysis, and managed numerous litigation projects. He has worked as an economist for the Federal Reserve Board, President's Council of Economic Advisers, International Monetary Fund, and Morgan Stanley, and as a securities analyst.

Dr. Montgomery has provided analysis and testimony on financial economics and valuation questions in a wide range of complex litigation and enforcement matters. He has provided analysis in numerous insider trading cases, both for prosecutors and for defendants. He has also provided analysis on issues related to the management of investment portfolios and investment companies, as well as issues related to disclosure by investment companies and broker-dealers. He has analyzed instances of alleged market manipulation, and he has analyzed the operation of customer margin accounts and related margin calls. He has led major projects related to regulatory investigations of stock exchanges, including latencies of data feeds and access to hidden orders, and the handling of retail order flow by brokers. In shareholder class actions, he has provided expert opinions and analysis addressing damages, price impact, loss causation, and market efficiency, and in ERISA class actions, he has provided opinions and analysis related to employer stock, 401(k) fees, and decisions related to investment options. He has analyzed issues related to corporate financial litigation, including minority interests, M&A transactions, and share repurchase programs. He has worked on the valuation of corporate liabilities, including issues related to corporate bankruptcy, and has analyzed the value of company stock and debt obligations in the context of securities class actions. He has valued employer stock options, basket options, and other derivatives. He has conducted statistical and econometric analysis of large data sets for financial litigation and regulatory projects.

Before getting his Ph.D., Dr. Montgomery worked as a securities analyst, valuing equities of companies in a variety of industries. He has provided pro bono analysis related to U.S. immigration removal proceedings.

Education

Ph.D., Economics, Princeton University

M.Sc., Economics, London School of Economics

B.A., Economics, Yale University, *cum laude with distinction in the economics major*

Professional Experience

Intensity, LLC. Managing Director, 2022 to present.

Ankura Consulting Group. Senior Managing Director, 2018 to 2022.

Navigant Consulting, Inc. Managing Director, 2015 to 2018.

NERA Economic Consulting. Senior Vice President, 2010 to 2015, Vice President, 2006-2010, Senior Consultant, 2002–2006.

Morgan Stanley, Inc. Vice President & Senior Global Economist, 1998 to 2001.

International Monetary Fund. Economist, 1993 to 1998.

President's Council of Economic Advisers. Senior Staff Economist, 1996 to 1997.

Board of Governors of the Federal Reserve System. Economist, 1989 to 1993.

J. Bush and Company, Inc. Research Analyst, 1982 to 1984.

Expert Reports and Testimony

GWA, LLC v. Commissioner of Internal Revenue, United States Tax Court, Case No. 6981-19. Expert report, rebuttal report, deposition, and trial testimony on investment returns, leverage and option risks, 2021–2022. Admitted in court as “an expert qualified in financial economics, including financial modeling and risk.”

Nykredit Portefølje Administration A/S vs. ProPetro Holding Corp., United States District Court, Western District of Texas, Case No. MO:19-CV-217-DC. Expert report on share price efficiency, price impact, damages methodology, and share tracing, for class certification, 2022.

United States v. Rhame et al., United States District Court, Northern District of Georgia, Case No. 1:16-CR-67-SCJ-CMS. Expert testimony at sentencing hearing on economics of exchange rates and foreign currency markets, 2021.

In Re Horsehead Corp. Securities Litigation, United States District Court, District of Delaware, Case No. 1:16-cv-00292. Expert report and deposition testimony on market efficiency and related issues for class certification, 2020.

Senior Health Insurance Company of Pennsylvania v. Beechwood Re Ltd., United States District Court, Southern District of New York, Case No. 1: 18-cv-06658. Expert report and deposition testimony on alleged damages, 2019.

Birse v. CenturyLink, Inc., United States District Court, District of Colorado, Case No. 1: 17-cv-02872. Expert reports and deposition testimony in ERISA dispute related to investment management issues, 2019.

In the Matter of The Bank of New York Mellon, Petitioner, Supreme Court of the State of New York, County of New York, Case No. 651786/11. Affidavit on cash flows to residential mortgage-backed securities, 2019.

Saber v. JPMorgan Chase, N.A., Superior Court of the State of California for the County of Orange, Case No. SACV 13-00812 DOC. Declaration on foreign currency and U.S. Treasury security markets, 2019.

Diverse Partners, LP, v. AgriBank, FCP, United States District Court, Southern District of New York, Case No. 16-CV-9526. Expert report, rebuttal report, and deposition on investor losses related to disputed early redemption of subordinated notes, 2019.

In re Parametric Sound Corporation Shareholders' Litigation, Eighth Judicial District Court, Clark County, Nevada, Case No. 66689. Expert reports and deposition testimony on economic analysis related to class certification and alleged damages in a corporate merger dispute, 2018–2019.

Euro Pacific Capital, Inc. v. Oppenheimer & Co., Inc., FINRA Case No.15-01484. Expert testimony, 2017.

United States v. Steven E. Slawson, United States District Court for the Northern District of Georgia, Case No. 1:14-CR-00186-RWS-JFK. Expert testimony at trial on trading dynamics, securities price movements, and evidence on materiality on behalf of an individual defendant in a criminal insider trading case, 2015.

Report, “Cost of Counsel in Immigration: Economic Analysis of Proposal Providing Public Counsel to Indigent Persons Subject to Immigration Removal Proceedings,” prepared pro bono for Wilmer Cutler Pickering Hale & Dorr LLP on behalf of the New York City Bar Association, 2014.

In the High Court of Ireland, In the Matter Between Gerard Dowling, Padraig McManus, Piotr Skoczylas, and Scotchstone Capital Fund Limited (Applicants) and The Minister for Finance (Respondent), Case No. C/41/15. Affidavit and Supplemental Affidavit, on the Eurozone crisis and the recapitalization of Irish Life & Permanent PLC, 2013–2014.

In re MedQuist, Inc. Shareholder Litigation, Superior Court of New Jersey Chancery Division - Burlington County, Civil Case No. 04-5487. Affidavit on valuation of exchange offer for minority shareholdings, 2011.

In re Tatum vs. R.J. Reynolds Tobacco Company, et al., United States District Court for the Middle District of North Carolina, Case No. 1:02-cv-00373. Report, supplemental report, deposition testimony, affidavits, and trial testimony on liability and damages under ERISA for the allegedly imprudent removal of Nabisco stocks as options in R.J. Reynolds 401(k) plan, 2008–2010. Admitted in court “as an expert in evaluations of securities, finance, economics, investing, the stock market, portfolio diversification, market efficiency, and computation of damages.”

In re Monster Worldwide Inc., Securities Litigation, United States District Court for the Southern District of New York, Case No. 1:07-cv-02237. Report on loss causation and alleged damages related to option backdating, 2008.

UBS Securities LLC and UBS Loan Finance LLC v. The Finish Line, Inc. and Genesco Inc., United States District Court for the Southern District of New York, Case No. 07-cv-10382. Report and deposition testimony on the impact of a potential recession on 2008 sales forecasts, 2008.

Jefferies & Company, Inc. vs. Brown-Forman Corporation, Court of Chancery for the State of Delaware. Report, deposition, and trial testimony on alleged damages from failure to deliver common stock in corporate tender, 2005.

Securities and Exchange Commission vs. Henry C. Yuen et al., U.S. District Court for the Central District of California, Western Division, Civil Action No. CV 03-4376 MRP. Report and deposition testimony on behalf of defendant Craig Waggy, on the materiality of alleged revenue misstatements, and on the estimation of losses avoided by the sale of stock before alleged corrective disclosures, 2004–2005.

In re Eaton Vance Corporation Securities Litigation, before United States District Court for the District of Massachusetts, Case No. 1:01-cv-10911-EFH. Report, supplemental report, and deposition testimony on alleged damage calculation, in Section 11 claim against manager of investment fund holding leveraged loans, which were allegedly overvalued, 2004.

Pirelli vs. Hanover Compressor Company, United States District Court for the Southern District of Texas, Case No. 4:02-cv-00410. Statement before the court on materiality, damages, and predicted settlement, for settlement of securities and ERISA class action litigation, 2004.

In re CVS Corporation Securities Litigation, United States District Court for the District of Massachusetts, Case No. PC-2019-5658. Affidavit on possible losses of plaintiff in securities class action, 2003.

Selected Consulting Engagements

Financial Enforcement and Regulatory Investigations

Consulting and data analysis for major bank on handling of retail stock order flow, for SEC investigation.

Analyzed dynamics of hidden and displayed orders and trading on a U.S. stock exchange.

Analyzed causes of stock price changes in biotechnology sector, related to regulatory investigation of alleged manipulation.

Prepared statistical analysis of stock-exchange proprietary and public (SIP) data feeds and related microstructure issues.

Analyzed composition of collateral (including subprime mortgages) of collateralized debt obligations (CDOs) held by a hedge fund.

Consulted with major brokerage firm, on regulatory investigations of fee-based brokerage accounts. Led team conducting statistical analyses of large databases of account activity and other information. Presented work to internal and external counsel, and prepared exhibits for regulatory presentations.

Analyzed impact of alleged stock-price manipulation in connection with SEC investigation into contested merger of two large banks. Prepared statement on behalf of merged bank for SEC staff.

Insider Trading

Analyzed allegations of alleged insider trading by a member of U.S. Congress, on behalf of Office of Congressional Ethics.

Analyzed stock trading data and evidence on materiality on behalf of an individual subject to an SEC investigation of possible insider trading. Made presentation to SEC staff on trading analysis.

Investigated evidence on the materiality of information subject to allegations of insider trading by a hedge fund investing in a Private Investment in Public Equity (PIPE) offering.

Prepared analysis and advised Ontario Securities Commission in prosecution of insider trading case. Supported testifying expert.

Estimated market impact of analyst opinion changes subject to alleged tipping.

Estimation of stock price impact of insider trades on price of M&A target.

Securities Class Actions

Advised Cayman Island liquidators of China-based company on value of securities class-action and related claims (2021).

Estimated alleged damages assuming liability in shareholder class action related to Special Purpose Acquisition Company (SPAC) transaction (2021).

Analyzed loss causation and estimated alleged damages in Section 11 and 12 shareholder class action related to an initial public offering for a media company.

Analyzed potential exposure for a company considering takeover of a target company that was subject to shareholder class-action claims.

Conducted event studies, reviewed news and analyst reports; analyzed trading of lead plaintiff, and estimated alleged damages, for 10b-5 class action involving a technology company.

Led team producing estimates of alleged damages under Rule 10(b)-5 and Section 11 for both common stock and fixed income securities, in securities fraud litigation with a complex set of allegations stemming from collapse of Enron, on behalf of Enron executives and directors (2002–2004).

Prepared event studies and analyses of alleged damages, and reviewed opposing expert's analysis, for 10(b)-5 and Section 11/12 class action involving a telecommunications company.

Supported finance professor in testimony over shareholder class action against major chemical company, related to product liability claims.

ERISA Class Actions

Estimated alleged damages for 401(k) plan under ERISA claims of allegedly imprudent investment in employer stock, for employment-services company subject to various actions related to options backdating. Provided estimates to assist counsel in negotiating settlement.

Estimated alleged damage claims for 401(k) plan under ERISA based on allegedly imprudent investment in employer stock, for a financial-services company. Provided estimates to assist counsel in negotiating settlement.

Analyzed investment fund fees, investment returns, and related issues, in support of testifying expert, in litigation on 401(k) plan fees for General Dynamics.

Estimated potential plaintiff damage claims under ERISA based on allegations of imprudent investment in company stock for the 401(k) plans of a beverage company.

Estimated alleged damages for 401(k) plans under ERISA based on allegedly imprudent investment in employer stock for telecommunications company, using both monthly plan and detailed participant data. Provided estimates to assist counsel in negotiating settlement.

Analyzed liability and damages under ERISA for alleged failure of fiduciaries to sell company stock from ESOP, for employee-controlled corporation (UAL), in advance of that company's bankruptcy. Drafted report for testifying expert. Report contributed to summary judgment decision that was upheld by 7th Circuit (*Summers v. State Street Bank & Trust Co.*).

Other Financial Disputes

Analyzed sovereign and corporate credit issues related to Eurozone member country receiving balance-of-payments support from European Union and IMF.

Provided valuation, financial research and modeling, and support for academic expert, in litigation over fairness of financial arrangements related to corporate minority interest.

Consulted for U.S. government in lawsuit by AIG shareholders over alleged takings involving government support for AIG.

Consulted and supported testifying academic experts, on claims of bank creditors against European country, relating to losses from resolution of systemic banking crisis.

Consulted for bank defendants on damages issues in lawsuit by Adelphia Recovery Trust alleging harm from “co-borrowing” facilities.

Led team identifying and analyzing disclosures of revenue sharing and directed brokerage by hundreds of mutual funds, to assist and plan testimony for major broker-dealer (A.G. Edwards) in state-court lawsuit alleging fiduciary breaches.

For series of lawsuits by investors in an exchange fund (a private investment fund holding low-cost-basis stock), valued equity portfolios and basket options. Analyzed diversification, hedging, margin borrowing, and various other issues related to liability of managers of fund for alleged failure to fully disclose hedging and securities positions and transactions.

Assisted insurance carrier in arbitration over coverage of D&O and fiduciary liability claims against a pharmaceutical company and costs of product recall.

Prepared analysis of diversification and investment strategy of a mutual fund and of the suitability of investment by a charitable fund. Supported testifying expert in arbitration.

Assisted Office of U.S. Attorney (S.D.N.Y.) in prosecution of criminal securities fraud case. Analyzed stock price movements and key events. Assessed evidence on materiality and related issues.

Estimated impact of reputational harm to profits of consumer finance company.

Other Projects

Prepared chapter on the economics of pension reform, for the report An Assessment of the Ghana Pension System by Mercer Consulting for the Swiss State Secretariat for Economic Affairs, 2012.

Conducted econometric and qualitative analysis of the project finance market.

Valued employee stock options and restricted stock grants in disputes regarding termination of members of senior management by a large corporation.

Analyzed impact of exchange-rate fluctuations on U.S. product prices, in antitrust litigation against vitamin manufacturer.

Publications

“Spoofing, Market Manipulation, and the Limit-Order Book,” Navigant Consulting, Inc. white paper, May 3, 2016.

“Spoofing and the Limit-Order Book,” Law360, April 29, 2016.

“Recent Trends in Securities Class Action Litigation: 2012 Mid-Year Review,” (with Renzo Comolli, Ronald Miller and Svetlana Starykh), NERA paper, July 24, 2012.

“Recent Trends in Securities Class Action Litigation: 2011 Year-End Review” (with Jordan Milev, Robert Patton and Svetlana Starykh), NERA paper, December 14, 2011.

“Insider Trading” (with David Tabak), NERA At A Glance, December 8, 2011.

“Economic Analysis in ERISA Litigation: What Should Investors Do, What Do They Do, and What Should Fiduciaries Do About It?” in *ERISA Litigation 2010*, Practising Law Institute, New York, 2010. Published as a three-part series in the *Employment Law Strategist*, July-September 2011.

“Economic Analysis in ERISA Litigation,” NERA At A Glance, April 2, 2009.

“The Fed’s Expanding Playbook: Economists Views” (with Elaine Buckberg), NERA Brief, 2008.

“Information Sharing and Central Bank Intervention in the Foreign Exchange Market,” *Journal of International Economics*, 2001 (with Helen Popper).

“Japan: Financial Sector Fragilities and the Stock Market,” International Monetary Fund, box in *World Economic Outlook: Interim Assessment*, 1997.

“Indonesian Financial System: Its Contribution to Economic Performance and Key Policy Issues,” International Monetary Fund, chapter 10 of *Macroeconomic Issues Facing ASEAN Countries*, 1997.

“Causes of Recent Swings in Bond Yields,” International Monetary Fund, box in *International Capital Markets: Developments, Prospects, and Key Policy Issues*, 1996.

“International Bond Issuance and the Swaps Market,” International Monetary Fund, box in *International Capital Markets: Developments, Prospects, and Key Policy Issues*, 1996.

“The Internationalization of German Financial Markets,” International Monetary Fund, chapter in *Germany: Selected Background Issues*, 1995.

“Evolution of the Mexican Peso Crisis,” International Monetary Fund, background paper in *International Capital Markets: Developments, Prospects, and Policy Issues*, 1995.

“Government Securities Markets,” International Monetary Fund, background paper in *International Capital Markets: Developments, Prospects, and Policy Issues*, 1994.

“Market Segmentation and 1992: Toward a Theory of Trade in Financial Services,” in *Financial Regulations and Monetary Arrangements after 1992*, North-Holland Press, 1991.

“Financial Structure: An International Perspective,” *Brookings Papers on Economic Activity*, 1991 (with Allen Frankel).